UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,129	11/20/2003	Jeffery Michael Barnes	TUC920030145US1	2241

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EXAMINER
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ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 November 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

2.   To help clarify new grounds of rejection, examiner makes the following assertions regarding applicant's arguments.

3.   Applicant's arguments are summarized as:

a.   Prior art does not teach nor suggest, in fact, teaches away from notifying one or more primary control units to temporarily stop sending data "by sending a message".

b.   Prior art does not teach nor suggest, in fact, teaches away from notifying to each previously notified primary control unit to "resume sending data by sending a message".

c.   Prior art does not teach nor suggest, in fact, teaches away from a "final" or "third" threshold in addition to a high threshold and a low threshold.

4.   Regarding arguments 'a', 'b', and 'c', examiner asserts that prior art's failure to teach the claimed invention or teaching of an *alternative* way is not teaching away. See MPEP 2123 and *re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

5.   Further regarding argument 'a', examiner asserts that through applicant's own admission, Reinemann discloses setting a flag causes a hosted process I/O to "return a disk-full error message" in paragraph 35. Therefore, setting a flag

still anticipates "notifying by sending a message". Examiner notes that the flag is *not* the message. It causes a message to be sent. Examiner further asserts that the claims do not include the limitation that "the message is not an error message", and reminds applicant that claims are read in light of the specification, but limitations from the specification are not read into the claims.

6.   Further regarding argument 'b', per the newly amended claims, examiner agrees that prior art of record does not teach explicitly notifying each previously notified primary control unit to resume sending data *"by sending a message"*.

7.   Further regarding argument 'c', examiner asserts that Reinemann teaches an upper threshold above which further usage is discouraged (paragraph 13). Reinemann also teaches a plurality of lower thresholds can be used to designate a resource available for sharing (paragraph 21). Wong teaches low and high watermarks (paragraph 56). If low watermark is exceeded, a message is sent to one or more primary control units to temporarily stop sending data. If a high watermark is reached, another message (interpreted as re-notifying) is sent to one or more primary control unit to temporarily stop sending data. *So combining teachings of Reinemann and Wong would result in at least three different thresholds:* at least one low threshold used to designate when a resource is available for sharing (Reinemann), a second threshold (low watermark) used to notify one or more primary control units to temporarily stop sending data, and a final threshold (high watermark) used to again notify one or more primary control units to temporarily stop sending data.

8.   In summary, examiner notes that prior art of record only fails to teach the

claim limitation, "notifying one or more previously notified primary control units to

resume sending data *by sending a message*".

9.   Accordingly, new grounds of rejection are provided below in light of the

above assertions.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

11.   Claims 1, 5-9, 13-17, 21-24 are rejected under 35 U.S.C. 102(e) as being

anticipated by Reinemann (PG Pub US 2003/0115118 A1) in view of Tzeng et al

(PG Pub #US 2003/0210651).

12.   As per claim 1, Reinemann discloses a method (figure 4) for throttling data

transfer, comprising; determining an amount of resources that are in use

(paragraph 11, 32; steps 415-417);

   When the amount of resources reaches a high threshold, notifying one or

more primary control units to temporarily stop sending data by sending a

message (paragraphs 35; step 426);

Reinemann discloses a low threshold (paragraph 13 and 21). However, Reinemann does not disclose explicitly when the amount of resources reaches a low threshold, notifying each of previously notified primary control unit to resume sending data by sending a message. Examiner notes that Reinemann discloses resources become available for sharing when reaching a low threshold.

However, Tzeng discloses when the amount of resources reaches a low threshold, notifying each previously notified primary control unit to resume sending data by sending a message (paragraph 26). Examiner notes that Tzeng discloses three thresholds: a high watermark, a low watermark, and another watermark (hysteristic threshold). When the hysteristic threshold is reached, PAUSE OFF frames are sent to device to resume data transmission (see bottom of paragraph 26). Teachings of Reinemann and Tzeng are from analogous field of shared resource management.

Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to combine Reinemann's teachings with Tzeng's teachings by using the resume messages in the system disclosed by Reinemann for the benefit of fair management of data flow (paragraph 19).

13.   As per claim 5, Reinemann and Tzeng combined disclose the method of claim 1, and Reinemann further discloses wherein at least one of the resources is a cache (paragraph 11)

14.   As per claim 6, Reinemann and Tzeng combined disclose the method of claim 1, and Reinemann further discloses wherein the amount is measured by a percentage (paragraph 16)

15.   As per claim 7, Reinemann and Tzeng combined disclose the method of

claim 1, and Reinemann further discloses wherein the one or more primary

control units that are notified to temporarily stop sending data are selected based

on an amount of resources being used by each primary control unit (paragraph

16)

16.   As per claim 8, Reinemann and Tzeng combined disclose the method of

claim 7, and Reinemann further discloses maintaining information on the amount

of resources being used by each primary control unit (paragraph 11, 16)

17.   As per claims 9, 13-17, 21-24 the examiner finds these claims differ from

the above rejected claims only in statutory category. The same arguments used

in rejection of the above claims are applicable in rejection of these claims.

18.   Claims 2, 10, and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Reinemann and Tzeng, and further in view of applicant's

admitted prior art.

Regarding claim 2, Reinemann and Tzeng combined disclose claim 1, but

do not disclose explicitly notifying all primary control units. However, in

description of the related art submitted by the applicant discloses a method for

throttling data transfer, wherein all primary control units are notified to temporarily

stop sending data (Figure 1; page 2, lines 8-15). Applicant's description of prior

art and teachings of Reinemann and Tzeng are from the same field of shared

resources management.

Therefore, at the time of invention, it would have been obvious for a

person of ordinary skill in the art to combine prior art described by the applicant

and Reinemann's invention because it would allow Reinemann's system to notify

all primary control units to stop sending data when resources are fully utilized

and therefore incapable of handling additional requests.

19.   As per claims 10 and 18 the examiner finds these claims differ from the

above rejected claims only in statutory category. The same arguments used in

rejection of the above claims are applicable in rejection of these claims.

20.   Claims 3-4, 11-12, 19-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Reinemann and Tzeng, and further in view of Wong (PG Pub

US 2004/0003069 A1).

21.   As per claim 3, Reinemann and Tzeng combined disclose claim 1 but do

not disclose explicitly: at a primary control unit, resuming sending data after a

predetermined period of time has expired without receipt of notification to resume

sending data.

Wong discloses at a primary control unit, resuming sending data after a

predetermined period of time has expired without receipt of notification to resume

sending data (paragraph 56). Teachings of Reinemann, Tzeng and Wong are

from the analogous art of shared-resource management and flow control in a

computer system.

Therefore, at the time of the invention, it would have been obvious for a

person of ordinary skill to combine teachings of Reinemann and Tzeng and

further with teachings of Wong by adding Wong's flow control algorithm to

Reinemann's resource management system. The motivation for doing so would

have been to provide improved flow control and usage of shared memory pool

(paragraph 12).

22.   As per claim 4, Wong discloses when the amount of resources used is

above a final threshold, re-notifying the one or more primary control units to

temporarily stop sending data.

23.   As per claims 11-12 and 19-20 the examiner finds these claims differ from

the above rejected claims only in statutory category. The same arguments used

in rejection of the above claims are applicable in rejection of these claims.

Conclusion .

24.   Applicant's amendment necessitated the new ground(s) of rejection

presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as

set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Scott Sun whose telephone number is (571)

272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

SS
1/27/2006

KIM HUYNH
SUPERVISORY PATENT EXAMINER